

EXPLANATION OF THE PLATES.

PLATE XV.

- Fig. 1. Sucking-disk of Remora. After Jordan and Evermann, 1900.
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PLATE XVI.

- Fig. 5. Imperato's "Echenei, sev Remora," 1599, the earliest-known figure of scientific value.
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PLATE XVII.

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XXX.—*The Ungual Phalanges termed Mylodon australis by Krefft, Spelæan Animal vel Thylacoleo by Owen, and Thylacoleo by Lydekker.* By R. ETHERIDGE, JR., Director and Curator of the Australian Museum, Sydney, New South Wales.

[Plates XVIII.-XX.]

I. THE UNGUAL PHALANGES (*MYLODON AUSTRALIS*)
OF KREFFT.

When a name has crept into print and is in the course of time practically forgotten, or overlooked, as the case may be, it is only fair to the author thereof to resuscitate it, if found to be stable and of value. On the other hand, if established under a misconception, and found to be of no value, it were better relegated to the limbo of synonymy, or the society of abolished names.

There are several such names in the early annals of Australian Palæontology, and in the present paper I purpose dealing with the name *Mylodon australis*, Krefft, and the objects it represents.

Mr. Gerard Krefft, a former Curator of the Australian Museum, referred to his *M. australis* on, at least, four separate occasions. The first reference I have been able to light upon is contained in one of our Museum publications—‘Guide to the Australian Fossil Remains exhibited by the Trustees of the Australian Museum, and arranged and named by Gerard Krefft,’ &c.*, wherein we read:—

“Order E D E N T A T A.

“Genus MYLODON ?

“*Myiodon ? australis*, Krefft.

“The presence of some animal, allied to the above extinct American genus, is indicated by a single terminal phalanx, or nail-bone, with its peculiar protecting bone, partly broken” †. This phalanx was obtained from the ossiferous deposit of the celebrated Wellington Caves, New South Wales.

The second reference appeared in Krefft’s ‘Australian Vertebrata—Fossil and Recent’ ‡, as follows:—

“E D E N T A T A.—Sloth Tribe.

“MYLODON.

“*Myiodon ? australis*,”

with similar remarks to those already quoted. This phalanx must have come into Krefft’s possession between 1867 and 1870, because there is no mention made of it in the first edition of the ‘Australian Vertebrata’ §.

The third reference is of a controversial nature, and is contained in “A Cuvierian Principle in Palæontology tested by evidences of an Extinct Leonine Marsupial (*Thylacoleo carnifex*), by Professor Owen, &c. Reviewed by Gerard Krefft,” &c. ||. Confining our attention to that portion of

* Pp. 15, 8vo, Sydney, 1870.

† *Ibid.* p. 4.

‡ ‘Industrial Progress of New South Wales,’ pt. iii. 1871, p. 715.

§ Krefft, “Australian Vertebrata (Recent and Fossil), representing all the Genera known up to the present time. With Notes by Gerard Krefft.” Cat. Nat. and Industrial Prods. N.S. Wales, sent to the Paris Universal Exhibition of 1867, by the New South Wales Commissioners (8vo. Sydney, 1867.—By Authority), pp. 91–110.

|| Krefft, *Ann. & Mag. Nat. Hist.* (4) x. 1872, pp. 169–182, pls. xi. & xii.

this paper strictly dealing with the matter under consideration, we find Mr. Krefft writing as follows:—"The claw to which I more particularly refer as being that of a 'megatheroid animal,' and which, with its next joint, is deposited in the Australian Museum . . . is what I stated it to be—'the unguis or terminal phalanx of a creature allied to *Myiodon*.' The upper face of the sheath is naturally open; and the next joint is short and thick, like some of the phalanges of Professor Owen's *Myiodon*. . . . I only draw attention to the probability that there were in olden times, as at the present day, small Edentata as well as large ones; and as I first discovered the presence of fossil edentate Monotremes in this country, I may be allowed to say, with the evidence before me, that animals allied to the *Myiodon* will yet be found" *.

Before proceeding to consider Krefft's fourth reference it is necessary to ascertain what Sir Richard Owen said of these terminal phalanges. It appears photographs were sent to Owen by Krefft, but how many and whether or no with the latter's *Myiodon* name attached there is no evidence to show. "Amongst the fossils obtained by Professor (A. M.) Thomson and Mr. Krefft from the breccia-caves of Wellington Valley were several unguis phalanges, some of which, equalling or surpassing those of a lion, were compressed, the vertical exceeding the transverse diameter, and being considerable in proportion to the length: these phalanges are curved and pointed, but the point is more or less blunted or broken, apparently after interment. They support a claw, and in most there are traces more or less plainly discernible of a bony sheath † which bound or strengthened the attachment of the base of the claw."

Owen then described the bones separately and continued:—"From these specimens may be inferred a spelæan animal with subcompressed decurved pointed claws, equalling or exceeding those of the Lion or Tiger in size, but supported by phalanges resembling those of *Thylacinus*, *Dasyurus*, and the *Opossums* in being non-retractile, or wanting the characteristic low position of the joint in the sheathed claw-bones of placental Felines, but resembling these phalanges, rather than the non-contractile ones of the marsupials above mentioned, in the proportion of depth to length and breadth." And finally:—"No evidence of a Megatheroid or other Edentate animal has been found from any cave or

* Krefft, *ibid.* pp. 180-181.

† So far as I can gather only one exhibited this.

fossiliferous deposit in Australia. The shape of the unguinal phalanges in Kangaroos and Wombats is known. The unguinal phalanges ('Extinct Mammals,' pl. x. figs. 11-14) are too small for *Nototherium* and *Diprotodon*, if even one were to entertain the idea of those huge Marsupial Herbivora having had sheathed, compressed, decurved, pointed claws like those which the phalanges in question plainly bore. These phalanges are as much too large for the *Thylacinus* and *Sarcophilus* *. But there is no other associated Carnivore corresponding in size with that of the animal indicated by them, save the *Thylacoleo*."

Krefft for the fourth time published his name and had figures prepared, the latter having a curious history. It appears that Owen, in 1867, proposed to the New South Wales Government "a careful and systematic exploration of the limestone caves of Wellington Valley," no doubt led thereto by his recollection of the discoveries made at Wellington by his old friend the Surveyor-General (Sir Thomas Livingstone Mitchell). This suggestion was adopted, and Krefft was placed in charge of the work; ultimately added to it was a similar exploration of the "Rivers of New South Wales." This exploration dawdled on until the early part of 1882, long after Krefft had ceased his connection therewith. A full account of all that took place during these fifteen years will be found in the N.S. Wales 'Votes and Proceedings' †, under the title, "Exploration of the Caves and Rivers of New South Wales (Minutes, Reports, Correspondence, Accounts)." The only portions of any scientific value are the reports of Messrs. Thomson and Krefft. In the latter's principal report, dated May 1870, the following appeared:—

"Order — ?

"*Mylodon? australis* (Krefft).

"A distal or unguinal phalanx of some unknown animal, resembling the same bone of a *Mylodon* (the distal phalanx of the pollex).

"The specimen referred to is quite unique, and proves the existence in Australia of a large sloth not unlike the

* Owen, Phil. Trans. 1871, pt. i. pp. 262-63, pl. xiii. figs. 11-14. It may be well to state at once, and definitely, that Owen's "unguinal phalanges" comprised two entirely different types of nail-bones; this will be made abundantly clear in the sequel.

† Krefft, 'Votes and Proceedings,' v. 1882, pp. 551-602 (pls. 14 numbered and 17 unnumbered).

South American genus *Mylodon*; the size of the bone is about 1 inch and 2 lines in length. Another much smaller distal phalanx, also covered by a 'hood' is in the collection, but this belongs evidently to either a dog or cat-like creature" *.

Krefft gave three figures of the largest of these phalanges in one of the numbered plates of the 'Caves and Rivers Report' (pl. 14, figs. 7-9). It appears that about 1870 he contemplated the publication of a work on 'Australian Fossil Mammals,' for which the seventeen numbered plates were prepared. But, as he explained elsewhere †, these plates "for want of funds were not published at the time," but in 1882 were appended to the Parliamentary "paper" referred to.

The MS. relating to these plates is preserved in the Mitchell Library, Sydney, and the explanation of figs. 7-9 reads as follows:—"Are distal phalanges or nail-bones of a very peculiar animal allied to the American genus *Mylodon*. It is impossible to say what kind of teeth the creature had judging from these two bones only. They probably resembled those of a Wombat."

One other reference will complete my knowledge of the history of *Mylodon* (?) *australis*, Krefft.

In the 'Catalogue of the Fossil Mammalia in the British Museum,' pt. v. 1887, Mr. R. Lydekker, in the list of *Thylacoleo* remains, records the cast of an unguual phalangeal with the remark, "the bone was evidently covered by a horny claw, like that of *Phalangista*" ‡. Now the point is this, the Owen hooded phalangeal of *Thylacoleo*, is *not* the Lydekker phalangeal of *Thylacoleo*, but the unsheathed bones of both Owen and Krefft are the latter.

What Mr. Krefft's views of the affinity of his fossils may have been after September 1872, I have no precise means of knowing, but I do not suppose any alteration took place, as he appears to have been obsessed with the Edentate affinity of his fossils, and always maintained his own opinions with great pertinacity.

In the photographs supplied to Prof. Owen and published in the 'Philosophical Transactions,' 1871, Owen's figs. 11 and 12 on pl. xiii. are the equivalents of Krefft's pl. 14, figs. 7-9 of the 'Caves and Rivers Report.' in the first instance two, and in the second three views of one and the same

* Krefft, *loc. cit.* p. 553; both are identically the same.

† Krefft, *Ann. & Mag. Nat. Hist.* (4) x. 1872, p. 172.

‡ Lydekker, *loc. cit.* p. 195.

specimen, still in the Australian Museum. Sir Richard, unfortunately, interchanged the numbers of two of his illustrations between the letter-press descriptions (p. 262) and the figure numbers on his pl. xiii. thus :—

For pl. xiii., fig. 12 read fig. 13.

“ ” ” 13 ” ” 12.

In his ‘Researches on the Fossil Remains of the Extinct Mammals of Australia,’ &c. (1877) another interchange was made, thus :—

For pl. x. fig. 11 read pl. ix. fig. 12.

“ ” ” 12 ” ” ” 13.

There remains the smaller “distal phalanx” referred to by Krefft in the ‘Caves and Rivers Report.’ This specimen is 20 mm. long by 14 mm. in breadth, inclusive of the sheath or hood, which is complete proximally, but broken away towards the distal end of the bone. It is similar in shape to the nail-bone called *Myiodon* by Krefft, but with a greater degree of curvature, and less size. The articular surface, just as in that previously referred to, occupies nearly the whole of the proximal end, and is divided into two subarticular surfaces by a median longitudinal ridge for adaption to the convexities at the distal end of the penultimate phalanx. The tuberos process for the flexor tendon attachment is remarkably prominent and stout in comparison to the size of the entire phalanx; on the plantar surface of this tuberosity are the two arterial foramina. Krefft considered this to belong “to either a dog or cat-like creature.”

With this last exception such are the phalanges described by Krefft as *Myiodon australis*, a supposed Australian Edentate, and referred by Owen to his *Thylacoleo carnifex* by deduction. In considering the affinity of these bones, the following general conclusions may, I think, be fairly arrived at :—

1. The law of probabilities is decidedly adverse to Krefft’s view. Had an Edentate existed in Australia in Post-Tertiary times, some more definite trace would have been met with ere this.
2. A right calcaneum, referred to this genus by Lydekker, is all we know of the feet of *Thylacoleo*, and this determination is problematical*.

* Lydekker, *loc. cit.* p. 195.

3. The reference of Krefft's *Myiodon* phalanges to *Thylacoleo* on the part of Owen was purely "conjectural" (to use his own expression), but at the same time a clever piece of deduction based on his view of the carnivorous habits of the "Marsupial Lion."
4. If we accept for the time being, the phalanges called *Myiodon? australis* as those of *Thylacoleo*, such acceptance will not in the least strengthen the views held either by Owen on the one hand, or Flower and his followers on the other, as to the gastronomical habits of *Thylacoleo*, hooded phalanges occurring amongst both herbivorous and carnivorous animals.
5. As possibly referable to *Thylacoleo* Owen figured two entirely distinct types of unguual phalanges.

We are now acquainted with the pedal bones of *Diprotodon* through the researches of Prof. E. C. Stirling, and it can be legitimately surmised that those of its second cousins *Nototherium* and *Euowenia* were similar. None of the Macropodidæ can put in a claim; amongst the flesh-eaters, *Sarcophilus* and *Thylacinus*, and the *Dasyures*, with the non-marsupial Warrigal, the osteological structure is too well known to require comment.

Finally, in all probability, although "conjectural" Owen's view of the nature of the hooded nail (eliminating those without a sheath) bones will in the long run prove to be correct; reduction of other genera by elimination supports it. If such be the case, then what is the claw referred to *Thylacoleo* by Lydekker? This will be investigated immediately.

The following is the synonymic bibliography of Krefft's unguual phalanges:—

- Myiodon? australis*, Krefft, Guide Austr. Foss. Remains, 1870, p. 4.
- " *australis*, Krefft, Austr. Vert. Foss. & Recent (Industrial Progress of New South Wales), 1871, p. 715.
- Spelean Animal* or *Unguiculate Mammal*, Owen (pars), Phil. Trans. 1871, pt. i. pp. 262, 263, pl. xiii. figs. 11-12 (non 13, 14).
- Megatheroid Animal*, Krefft, Ann. & Mag. Nat. Hist. (4) x. 1872, p. 180.
- Spelean Animal . . . Thylacoleo*, Owen, Foss. Remains Extinct Mamm. Austr. i. 1877, pp. 182-183, ii. pl. ix. figs. 11-12.

Mylodon? australis, Krefft, N. S. Wales Votes & Proceedings, v. 1882, p. 558, 14th numbered pl., figs. 7-9.

II. THE UNGUAL PHALANX PROVISIONALLY CATALOGUED AS *THYLACOLEO* BY LYDEKKER.

Many years ago a plaster replica of another of Krefft's specimens *, described in MS. as the "nail-bone of the hind foot of a gigantic Phalanger, probably a small *Zygomaturus*, *Nototherium*, or *Diprotodon*" was forwarded to the Geological Department of the British Museum (Natural History). I surmised this might be No. M. 1523 † of the 'British Museum Catalogue of Fossil Mammals,' part v. (p. 195) catalogued by Lydekker as "cast of an unguual phalangeal" provisionally of *Thylacoleo*; by correspondence Dr. A. S. Woodward confirmed this. The original bone is preserved here and is slightly imperfect; it is from the Wellington Caves, and bears the number A. 13320 (Pl. XVIII. fig. 2). It is manifest, if the sheathed nail-bones ("*Mylodon*") are referable to *Thylacoleo*, following Owen, such an arched, laterally compressed and naked bone, one of those spoken of by Krefft as "large nail-bones . . . evidently those of a Phalanger" ‡, cannot. One of these § is probably the original of both Owen's illustrations of his non-sheathed *Thylacoleo* unguual phalangeal. Our collection contains five of these bones, four from the Wellington Caves ossiferous breccia (Pls. XVIII.-XIX. figs. 2-9), the fifth from Cope's Creek, probably from a thermal mud-spring deposit (Pl. XX. figs. 10-12). These vary much in size and degree of dorsal curvature, and for the convenience of description may be taken separately.

Type 1.—The phalanx in question || (Pl. XIX. figs. 8 & 9) is highly arched, compressed laterally, the dorsal edge thin, sharp (trenchant), the degree of curvature almost equal to the quadrant of a circle, the general appearance of the bone being decidedly hook-like. The proximal end is imperfect, the articular surface and the plantar tuberosity gone; it is 35 mm. wide, and in thickness 8 mm.

The second example never seen by Krefft or Owen (Pl. XX. figs. 10-12) is a more perfect specimen, one in

* Krefft, 'Caves and Rivers Report,' pl. 14 (numbered), fig. 12.

† Dr. A. S. Woodward informs me this should read 1536.

‡ Krefft, *loc. cit.* pl. 14. (numbered), figs. 11 and 12.

§ Krefft, *loc. cit.* MS. description of pl. 14. fig. 11.

|| Krefft, *loc. cit.* pl. 14. (numbered), fig. 2.

which the proximal articular surfaces, allowing for wear and tear, are perfect. The lateral surfaces (at the point of disruption in Pl. XIX. figs. 8 & 9) suddenly bulge outwards to form an expanded proximal end with a concave articular surface divided by a longitudinal central ridge, and below a very strong and comparatively large cushion for the attachment of the flexor tendon. Immediately above the centre of the tendon tuberosity on either side, are the foramina of the digital arteries. The surface of both specimens is pitted and roughened.

Length of complete bone 51 mm.; breadth 45 mm. approximately; thickness 13 mm.

Type 2.—The phalanges of the second type (Pls. XVIII.—XIX. figs. 2–7) differ from those of the first by a greater length in proportion to width, a much less arched dorsal edge, and a slightly less lateral compression, otherwise the same features characterize both. The following are the dimensions of the largest:—

Length 45 mm.; breadth 29 mm.; thickness 11 mm.

In the sheathed, or hooded terminals of Owen, although the nail-bone is compressed laterally (Pl. XVIII. fig. 1) the dorsal edge is only sharp or trenchant distally, the proximal end is truncate-flattened forming an elongately triangular surface. The articular surface for union with the distal end of the penultimate digit is highly concave, and much overhung above, as figured both by Owen and Krefft. The sheath is one with the core, or nail-bone, at the proximal end around the articular concavity, and along the plantar surface as far as it extends; the tuberosity is to some extent flattened. The arterial foramina pierce the sheath through the plantar surface of the tendon tuberosity, and then appear to enter the nail-bone as in the preceding type. Immediately below the dorsal truncate surface at the proximal end are two other arterial foramina.

Now, to what type of Marsupial do these unguinal phalanges (Pls. XVIII.—XX. figs. 2–12) belong? It will be more satisfactory to consider Types 1 and 2 separately. Type 1 (Pls. XIX.—XX. figs. 8–12) is the "nail-bone of a gigantic Phalanger of Krefft," but this form appears to have been quite unknown to Owen. In the Macropodidæ the nail-bones are elongate, non-trenchant, more or less oval in section, and very feebly arched, if at all. The nail-bones of the Peramelidæ are double, more or less circular, and non-trenchant. In the Phascologyidæ, or Wombats, these terminals are again rounded above, roughly oval in section, and not hooked. The nail-bones of the Diprotodontidæ,

guided by Prof. E. C. Stirling's reconstruction of *Diprotodon*, resemble to some extent those of the Kangaroos, plano-convex, slightly curved, broad plantar surface, and the proximal concavities occupying the whole articular surface, instead of about two-thirds as in Types 1 and 2; moreover, the position of the foramina of the plantar artery branches is markedly different. What is true of the nail-bones of *Diprotodon* is possibly equally true of those of *Nototherium* and *Euowenia*.

There remain the Dasyuridæ and Phalangeridæ. In the first, taking the Tasmanian Wolf (*Thylacinus cynocephalus*, Harris) as an example, the nail-bones are long, more or less oval in section, rapidly decreasing in size from the proximal to the pointed distal end. The latter are more particularly accentuated in the Tasmanian Devil (*Sarcophilus ursinus*, Harris, Pl. XIX. fig. 14), in which the distal ends of these nail-cores are to all intents and purposes, acicular; hence, I dismiss the Dasyuridæ from consideration.

This reduces comparison to the Phalangeridæ, the family in which Krefft placed * these remains. The resemblance of the large complete specimen (Pl. XX. figs. 10-12) from Cope's Creek to similar bones of some members of this family is very striking. For the purpose of comparison I have selected two, the Great Flying Phalanger (*Petauroides volans*, Kerr) and the Koala, or "Native Bear" (*Phascolarctos cinereus*, Goldfuss) †. In the Flying Phalanger it is the 4th and 5th digits which terminate in nail-bones so remarkably like the Cope's Creek fossil (Pl. XX. figs. 10-12), but in the Koala the resemblance is not so strong (Pl. XIX. fig. 13), in consequence of the much greater length in proportion to width; this, however, only partially holds good for the pollices ‡. With these facts before me I can come to no other conclusion than that the subjects of Pls. XIX.-XX. figs. 8-12 are the terminal phalanges of an enormous Phalanger, following Krefft in this opinion, but in a more restricted sense than he employed the term.

We may now pass to the second type (Pls. XVIII.-XIX. figs. 2-7). The two specimens are Krefft's "large nail-bones

* Bearing in mind that Krefft included *Diprotodon*, &c., in this family.

† One fact in connection with the terminal phalanges, or nail-bones, of the Phalangers in general is very obvious, the stouter and stronger build of those of the fore feet, accompanied with a greater degree of curvature.

‡ One of the most noticeable features in Type 1 is the remarkable slab-sided, or straight-walled appearance.

... evidently those of Phalangers," and one (Pl. XVIII. fig. 5) is Owen's *Thylacoleo* "ungual phalangeal" (his fig. 13) and Lydekker's *Thylacoleo* "ungual phalangeal." By the same method of elimination as observed in the case of Type 1, I reduce consideration in this instance to the Phalangeridæ alone. There is no greater degree of variation between Types 1 and 2 than there is in the forms of the terminals of the same foot of many species of Phalangeridæ. I, therefore, again support Krefft's views of the affinity of these bones, but to what genus of the family the animal possessing them was most nearly allied only time can prove. For my own part I am rather in favour of a gigantic Koala.

The following table explains the relative identity of the various figures referred to:—

Krefft's figs. Austr. Foss. Remains.	Owen's figs. Phil. Trans. 1871 (1872).	Owen's figs. Extinct Mamm. of Australia.	Present figs.
Pl. 14, fig. 2.	.....	.....	Figs. 8 & 9.
" " 7.	.....	.....	.....
" " 8.	Pl. xiii. figs. 11 & 12.	Pl. ix. figs. 11 & 12.	Fig. 1.
" " 9.	.....	.....	.....
" " 11.	? Pl. xiii. figs. 13 & 14.	? Pl. ix. figs. 13 & 14.	? Figs. 5-7.
* " " 12.	.....	.....	Figs. 2-4.

In these notes I have sought to show that:—

1. Owen figured as the possible unguinal phalanges of *Thylacoleo* two entirely distinct nail-bones—a "hooded" form, and an unhooded or unsheathed one; both cannot belong to the same kind of animal.

2. If the hooded bone be accepted for the time being as of *Thylacoleo*, then the bone catalogued as "cast of an unguinal phalangeal" by Lydekker cannot possibly be so.

3. The non-sheathed terminals (Types 1 and 2) were never claimed by Krefft as appertaining either to his *Myledon australis*, or to *Thylacoleo*.

4. *Thylacoleo* is regarded by the advocates of its herbivorous nature as a member of the Phalangeridæ. If it be so, then the phalanges of Types 1 and 2 may, perhaps, be those of it.

5. If the suggestion contained in the last paragraph should

* This is the original of the replica called by Lydekker *Thylacoleo* (A.M. 13320, B.M. 1526 (36)).

prove correct, it follows that the identity of the hooded bones (" *Mylodon australis* ") has yet to be discovered.

The suggestion of an extinct Koala may possibly be not so speculative as would at first sight appear when it is remembered that Mr. C. W. de Vis described* a portion of a fibula that he believed represented " a progenitor of the Koala." The further discovery of a premaxillary with its palatal process was held to strengthen this view. Said Mr. de Vis :—" The Koala, or Native Bear, is now one of the few types of Australian life which has not been recognized as a part of its ancient economy: yet it is one of which no one could be surprised to find an ancestral form among the past modifications of marsupial structure." He proposed to distinguish the former owner of this fibula by the name of *Koulemus ingens*. Portion of a shoulder-blade was referred to another extinct Phalanger (*Archizonurus securus*).

EXPLANATION OF THE PLATES.

- Fig.* 1. The original of Krefft's "ungual or terminal phalanx of a creature allied to *Mylodon*," with "its peculiar protecting bone partly broken." The original of Krefft's figs. 7 and 8, and Owen's 11 and 12. Wellington Caves. $\times 2$ diam.
- Fig.* 2. Ungual phalange "equalling or surpassing those of a Lion" (Owen). This is the original of Krefft's fig. 12, and Lydekker's Catalogue (M. 1526 (36)). Wellington Caves. $\times 2$ diam.
- Fig.* 3. Dorsal view of the bone, fig. 2. $\times 2$ diam.
- Fig.* 4. Plantar " " " " " " " " " " " "
- Fig.* 5. Another phalange similar to Fig. 2, but with the dorsal surface straight, or even a little concave. This is probably the original of Owen's figs. 13, 14. Wellington Caves. $\times 2$ diam.
- Fig.* 6. Dorsal view of fig. 5. $\times 2$ diam.
- Fig.* 7. Plantar " " " " " " " " " " " "
- Fig.* 8. Highly compressed unguual phalange with the proximal portion broken away. Original of Krefft's fig. 2. Wellington Caves. $\times 2$ diam.
- Fig.* 9. Dorsal view of fig. 8.
- Fig.* 10. Probably the almost perfect condition of an unguual phalange similar to that seen in fig. 8. Cope's Creek. $\times 2$ diam.
- Fig.* 11. Plantar view of fig. 10. $\times 2$ diam.
- Fig.* 12. Dorsal " " " " " " " " " " " "
- Fig.* 13. *Phascolarctos cinereus*, Goldfuss. Ungual phalanx of the right fore foot.
- Fig.* 14. *Sarcophilus ursinus*, Harris. Fourth unguual phalanx of right fore foot.

* De Vis, 'On the Phalangistidæ of the Post-Tertiary Period in Queensland,' Proc. R. Soc. Queensland, vi. pts. ii. & iii. p. 106.